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PATENT DOCKET 207,769



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**APPLICANT:** Roveri et al. **EXAMINER:**  
**SERIAL NO.:** 10/591,308 **ART UNIT:**  
**FILED:** August 18, 2006  
**FOR:** **BIOMIMETIC COMPOUNDS CONTAINING  
HYDROXYAPATITES SUBSTITUTED WITH MAGNESIUM AND  
CARBONATE, AND THE PROCESSES USED TO OBTAIN THEM**

**Date: May 2, 2007**

**STATEMENT OF FILING BY EXPRESS MAIL 37 C.F.R. § 1.10**

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**INFORMATION DISCLOSURE STATEMENT**

**Honorable Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**Sir:**

This Information Disclosure Statement (hereinafter sometimes referred to as "IDS") is submitted in accordance with 37 C.F.R. 1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 C.F.R. 1.97, as it is filed:

(Check one of the boxes opposite A-D)

☐ A. within three months of the filing date of the above-identified national application or within three months of the date of entry of the national stage as set forth in 37 C.F.R. 1.491 in the above-identified international application.

☒ B. before the mailing date of a first office action on the merits.

☐ C. after the times set forth in (A) and (B) above, but before the mailing date of either a final action under 37 C.F.R. 1.113 or a notice of allowance under 37 C.F.R. 1.311, and the necessary statement pursuant to 37 C.F.R. 1.97(e) appears below (see box "i") or the necessary fee is enclosed (see box "ii" below).

(check one of the boxes opposite "i" or "ii" below)

☐ i. (check the applicable statement)

☐ I, the undersigned, hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ I, the undersigned, hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

☐ ii. A check for the fee set forth in 37 C.F.R. 1.17(p), presently believed to be \$180.00, is enclosed.

☐ D. after the times set forth in (A), (B), and (C) above, but before payment of the issue fee, since Applicant petitions for the consideration of this Information Disclosure Statement by a petition enclosed herewith pursuant to 37 C.F.R. 1.97(d)(2), a check for the petition fee set forth in 37 C.F.R. 1.17(i), presently believed to be \$ 130.00, is enclosed, and the necessary statement pursuant to 37 C.F.R. 1.97(e) appears below:

(check the applicable statement)

☐ I, the undersigned, hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ I, the undersigned, hereby state that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

2. In accordance with 37 C.F.R. 1.98(a)(1), this IDS includes a list on form PTO-1449 of all patents, publications, or other information submitted for consideration by the Office, incorporated into this IDS as an attachment hereto. Pursuant to 37 C.F.R. 1.98(b): (i) each U.S. patent listed is identified by patentee, patent number, and issue date; (ii) each foreign patent or published foreign patent application is identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application; and (iii) each publication is identified by author (if any), title, relevant pages of the publication, date, and place of publication. A legible copy of each document listed is attached and incorporated into this IDS, except that no copy of any U.S. patent application is included pursuant to 37 C.F.R. 1.98(a)(2)(iii) and except as explained below.

(check the boxes opposite A and/or B and fill in blanks, if appropriate)

☐ A. Document(s) \_\_\_\_\_ is (are) substantively cumulative to document(s) \_\_\_, and, in accordance with 37 C.F.R. 1.98(c), only a copy of each of the latter document(s) is (are) attached.

☐ B. Certain documents were previously cited by or submitted to the Office in the following prior application(s), which are relied upon for an earlier filing date under 35 U.S.C. 120:

[insert serial numbers and filing dates of prior applications]

These documents are identified by attaching hereto copies of the forms PTO-892 and/or PTO-1449 from the files of the prior application(s) and Applicant requests that they be considered and made of record in this application in accordance with 37 C.F.R. 1.98(d). Pursuant to 37 C.F.R. 1.98(d), copies of these documents need not be provided with this IDS.

(check paragraphs 3 and/or 4, if applicable)

☐ 3. Document(s) \_\_\_\_\_ is (are) not in the English language. In accordance with 37 C.F.R. 1.98(a)(3), 1.98(c), it is stated that:

(check the applicable statement(s))

☐ English translation(s) of the document(s) \_\_\_\_\_ (or of the pertinent portions thereof) is (are) enclosed and, thus no concise explanation of their relevance is required, (see M.P.E.P., 609, p. 600-92).

☐ English-language equivalent(s) of the document(s) \_\_\_\_\_ (or of the pertinent portions thereof) which is (are) in fact translation(s) of the document(s) is (are) enclosed.

☐ The attached English-language version of a search report or other action by a foreign patent office in a counterpart foreign application which cites document(s) \_\_\_\_\_ and which indicates the degree of relevance found by the foreign office is submitted to satisfy the requirement for a concise explanation of the relevance of the document(s), (see M.P.E.P., 609, p. 600-93).

☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ is set forth as follows:

[insert concise explanation of relevance]

☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ can be found on page(s) \_\_\_\_\_ of the specification.

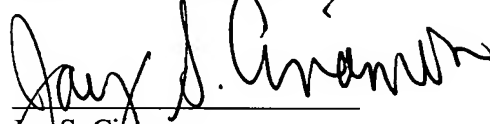
☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ can be found on the attached sheet.

☐ 4. Other information being provided for the Examiner's consideration follows:

5. In accordance with 37 C.F.R. 1.97(g), 1.97(h), the filing of this IDS shall not be construed as a representation that a search has been made or as an admission that information cited in this IDS is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b). Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.


6. Please charge any deficiency or other fees or credit any refund or overpayment to Deposit Account No. 01-0035.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jay S. Cinamon", written over a horizontal line.

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Form PTO-1449 (Rev. 7-80)		U.S. Department of Commerce Patent and Trademark Office	Atty. Docket Control No. 207,769	Serial No. 10/590,186				
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> (Use several sheets if necessary)			Applicant Roveri et al.					
			Filing Date August 18, 2006	Group --				
<b>U.S. PATENT DOCUMENTS</b>								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
	AA							
	AB							
	AC							
	AD							
<b>FOREIGN PATENT DOCUMENTS</b>								
		Document Number	Date	Country	Class	Subclass	Translation YES NO	
	AE							
	JP	6	2	4	5	9	9	2
	AF							
	AG							
<b>OTHER RELATED ART</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>								
	AH	Landi et al., "Carbonated hydroxyapatite as bone substitute," Science Direct, Journal of the European Ceramic Society 23 2931-2937.						
	AI	Redey et al., "Osteoclast adhesion and activity on synthetic hydroxyapatite, carbonated hydroxyapatite, and natural calcium carbonate: Relationship to surface energies," John Wiley & Sons, Inc., 1999.						
	AJ	Gibson et al., "Preparation and characterization of magnesium/carbonate co-substituted hydroxyapatites," Journal of Materials Science: Materials in Medicine 13 (2002) 685-693.						
	AK	Redey et al., "Behavior of human osteoblastic cells on stoichiometric hydroxyapatite and type A carbonate apatite: Role of surface energy," John Wiley & Sons, Inc. 2000.						
	AL	Gibson et al., "Novel synthesis and characterization of an AB-type carbonate-substituted hydroxyapatite," John Wiley & Sons, Inc., 2001.						
	AM	Bigi et al., "Magnesium Influence on Hydroxyapatite Crystallization," Journal of Inorganic Biochemistry, 49, 69-78, 1993.						
	AN	Baravelli et al., "Thermal Behavior of Bone and Synthetic Hydroxyapatites Submitted to Magnesium Interaction in Aqueous Medium," Journal of Inorganic Biochemistry 20, 1-120, 1984.						
	AO	Bigi et al., "Structural analysis of turkey tendon collagen upon removal of the inorganic phase," Int. J. Biol. Macromol., 1991, Vol. 13, April.						
	AP	Bigi et al., "The Role of Magnesium on the Structure of Biological Apatites," Calcified Tissue International, 1992, Springer-Verlag New York Inc.						
	AQ	Bigi et al., "Rietveld Structure Refinements of Calcium Hydroxylapatite Containing Magnesium," Acta Cryst., B52, 87-92, 1996.						
Examiner			Date Considered					
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								